REMARKS

In accordance with the above amendments, claims 135, 152, 154 and 168 have been amended. Claims 135-144, 152-161 and 168-176 remain under consideration in this application. No claim stands allowed.

Claims 135, 152, 154 and 168 have been amended to indicate that the transgenic polynucleotide is included in a virus or virus-derived DNA. The basis for this clarifying language is found throughout the specification, for example at page 10, line 28 to page 11, line 11, where viral vectors are discussed, and on page 13, lines 6-19 where it is noted that the genetic material introduced is also present in the somatic cells of the progeny. Genetic material is defined at page 11, lines 12-22. It is noted in this regard that the viral DNA associated with the transgene will be present in the progeny. Claims 135, 152, 154 and 168 have been also been amended to limit the transgene to one other than a transgene that encodes an oncogene product.

With respect to the rejection of claims 152 and 168 under 35 U.S.C. § 112, second paragraph, these claims have been amended to indicate that the polynulceotide in fact encodes the "product". It is believed that these amendments under the claims definite and overcome the rejection under 35 U.S.C. § 112.

With respect to the obviousness-type double patenting rejection based on co-pending Application No. 10/074,945,

applicants acknowledge the rejection and are prepared to submit a necessary Terminal Disclaimer at the proper time, however, any present action in that regard is considered unwarranted.

The rejections of the claims under 35 U.S.C. § 102(e) is being anticipated by Brinster et al. (U.S. Patent 5,858,354) or by Deboer et al. (U.S. Patent 5,741,957) are believed to have been overcome by the amendments as will be discussed.

For example, Brinster '354 fails to disclose that the progeny contained virus-derived DNA associated with the transgene. The presently claimed transgenic animals and progeny thereof are all ones which, because of the process by which they are made, contain virus-derived DNA. It will further be noted with respect to Brinster, that the (donor) male mice which are the source of the testes cells which are introduced into recipient testes, are ones which contain *E coli lacZ* gene (see Examples A and B). There is no indication whatsoever that viral vectors have been used and, in fact, the only way that the progeny are tested to show that they contain a transgene is by staining for β-galactosidase activity. For these and other reasons, it is believed that the transgenic non-human animals claimed in the present claims distinguish over Brinster.

The Deboer et al. '957 reference relates to transgenic bovines which express recombinant protein in their milk. It does not relate to male germ cell manipulation at all. The transgenic

bovines of Deboer et al. are made using microinjection of pronuclei with *plasmids* or *cosmids* (see, for example, Example 7 which appears to make us of the vectors of Examples 4 and 5). Thus, unlike the claimed transgenic non-human animals, the trangsgenic bovines of Deboer et al. do not contain virus-derived DNA associated with the transgene. Thus, the claimed transgenic non-human animals of the present invention are believed to be patentable over Deboer et al.

The Leder et al. reference relates to the expression of activated oncogenes in transgenic non-human mammals which is not included in the scope of the present claims.

It should further be noted that products made by introduction of the viral vector into a prepared testis in vivo, i.e., the claimed method could be distinguished from other products made using a viral vector but a different method because the pattern of integration or signature of entry would be different. The status and accessibility of the genome in a germ cell in vivo will be different from germ cells in culture or in other types of stem cells. A viral vector encountering a genome will integrate areas that are more easily accessible thus providing a characteristic pattern of entry. The entry points of the virus will be characteristic for the type and status of the cell.

In view of the above amendments taken together with remarks herein, applicants believe that the present claims distinguish over the prior art and respectfully request that the Examiner reconsider and withdraw the present rejections and allow the claims.

Respectfully submitted,

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